iChallenges

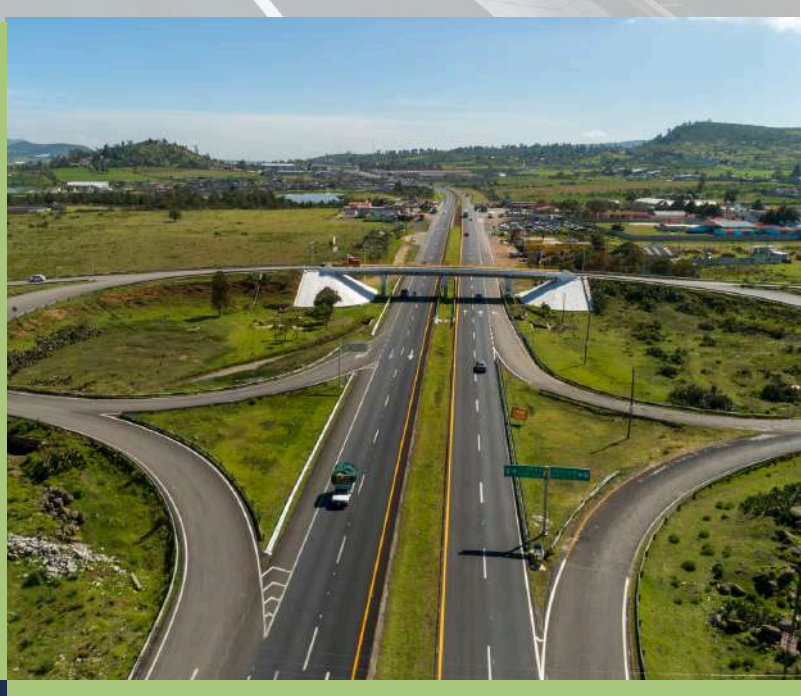
A Sacyr Open Innovation Program

Towards automation that impacts the safety and efficiency of our roads

How can we automate our roads during the construction, operation or maintenance phases using technologies that continue to improve safety, optimize management and anticipate infrastructure responses?

Challenge background

Road infrastructure - from highways and viaducts to bridges and tunnels - requires the coordination of multiple teams throughout its lifecycle. Automating construction, operations, and maintenance can significantly improve asset management, user experience, and the safety of drivers and workers. Emerging technologies such as sensors, robotics, drones, and intelligent systems open new perspectives for tackling these challenges and building more efficient, safer infrastructure.



Who we are looking for

We're looking for partners to make our infrastructure even more efficient and secure through automation and robotics.

We welcome startups, scaleups, established companies, technology leaders, research centers, universities, and other potential collaborators ready to test and scale their solutions in real environments with Sacyr.

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Areas of application

Road design and construction

During the execution phase, key activities such as materials management, earthmoving and transportation, viaduct concreting, and pavement laying can be reimagined through automation and robotics.

Infrastructure maintenance and evolution

Pavements, bridges, tunnels, and surrounding environments require continuous maintenance. New ways to detect issues and respond to incidents can transform how road infrastructure is maintained and managed over time.

Worker safety and road safety

During road construction and maintenance, workers often operate close to live traffic and high-risk situations. Automating signaling systems and high-risk tasks can significantly improve safety for both workers and road users.

Operations, user assistance, and traffic management

Traffic volume and speed have a long-term impact on infrastructure performance, while congestion directly affects sustainability and response times for users. Improving traffic flow and management is therefore a critical element of road operations.

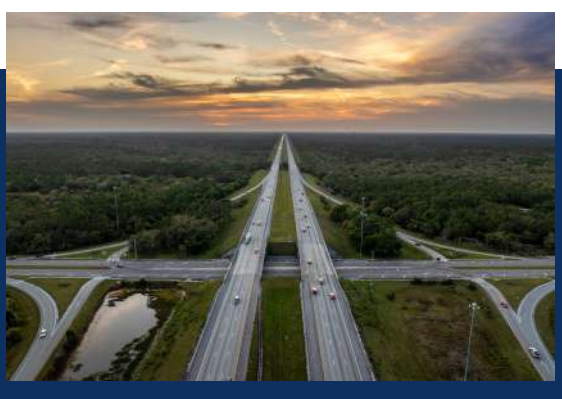
Our goal, together

By applying technologies such as sensors, robotics, drones, and intelligent systems across construction, operation, and maintenance, we aim to continue improving safety, efficiency, and asset performance throughout the infrastructure lifecycle.

If you're developing technologies for roads, this is your opportunity to turn innovation into impact.

What you gain

- Collaborate directly with Sacyr's business units and technical experts
- Validate solutions through pilot projects in real operational environments
- Receive structured feedback throughout the evaluation process
- Co-create innovation addressing real infrastructure challenges
- Access Sacyr's global footprint across 20+ countries
- Build long-term partnerships focused on sustainability and positive impact



All proposals are evaluated by internal and external experts through a structured selection process. If you're developing technologies for safer roads, smarter operations, or automated construction, and are ready to turn innovation into real-world impact, we invite you to join us.

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